

Revise existing 310 CMR 7.72 *Reducing Sulfur Hexafluoride Emissions from Gas-Insulated Switchgear*, to read as follows:

310 CMR 7.72 Reducing Sulfur Hexafluoride Emissions from Gas-Insulated Switchgear

(1) Purpose, Scope and Authority. The purpose of 310 CMR 7.72 is to assist the Commonwealth in achieving the greenhouse gas emissions reduction goals adopted pursuant to M.G.L. c. 21N, § (3)(b) by reducing sulfur hexafluoride (SF₆) emissions from gas-insulated switchgear through the imposition of declining annual aggregate emission limits and other measures on gas-insulated switchgear. 310 CMR 7.72 is promulgated pursuant to M.G.L. c. 21N, § 3(d) and is also promulgated pursuant to M.G.L. c. 21A, §§ 2, 8 and 16, and M.G.L. c. 111, §§ 2C and 142A-142E, to prevent and abate conditions of air pollution from greenhouse gas emissions.

(2) Definitions. The terms used in 310 CMR 7.72 are defined in 310 CMR 7.72(2) and in 7.00: *Definitions*. Where a term is defined in 310 CMR 7.00: *Definitions* and in 7.72, the definition in 310 CMR 7.72 shall apply.

Active GIS Equipment means non-hermetically sealed SF₆ gas-insulated switchgear that is:

- (a) Connected through busbars or cables to the GIS owner's electrical power system; or
- (b) Fully-charged, ready for service, located at the site in which it will be activated, and employs a mechanism to monitor SF₆ emissions.

Active GIS Equipment does not include equipment in storage.

Electrical Power System means the combination of electrical generators (e.g., power plants), transmission and distribution lines, equipment, circuits, and transformers used to generate and transport electricity from the generators to consumption areas or to adjacent electrical power systems.

Federal Reporting GIS Owner means a GIS Owner who has ever been required or who is currently required to report SF₆ emissions to US EPA pursuant to 40 CFR Part 98, Subpart DD (§ 98.300 through 308).

Gas-insulated switchgear or GIS means all electrical power system equipment insulated with SF₆ gas. Gas-insulated switchgear or GIS includes switches, stand-alone gas-insulated equipment, and any combination of electrical disconnects, fuses, electrical transmission lines, transformers and/or circuit breakers used to isolate gas-insulated electrical power system equipment.

GIS Owner means the person who owns, leases, operates, or controls gas-insulated switchgear used in Massachusetts. GIS owner excludes temporary possession by the following persons:

- (a) the original equipment manufacturer during GIS equipment transport and installation at a customer's site; and
- (b) a qualified person who hauls the GIS for reuse, recycle or destruction.

Hermetically Sealed Gas-insulated Switchgear means switchgear that is designed to be gas-tight and sealed for life. This type of switchgear is pre-charged with SF₆, sealed at the factory, and cannot be refilled by its user.

(3) Applicability.

- (a) Any federal reporting GIS owner is subject to 310 CMR 7.72(1) through (9).

(b) Any GIS owner that is not a federal reporting GIS owner is subject to 310 CMR 7.72(1) through (4), (8), and (9), and not subject to 310 CMR 7.72(5) through (7).

(4) General Requirements for All GIS Owners.

(a) Any newly manufactured GIS that is placed under the ownership, lease, operation, or control of any GIS owner on or after January 1, 2015 must be represented by the manufacturer to have a 1.0% maximum annual leak rate.

(b) Any GIS owner that places GIS under ownership, lease, operation, or control on or after January 1, 2015 shall comply with any manufacturer-recommended maintenance procedures or industry best practices that have the effect of reducing leakage of SF₆.

(c) If any particular piece of active GIS equipment placed under the ownership, lease, operation, or control of any GIS owner on or after January 1, 2015 does not meet the 1.0% maximum annual leak rate, the GIS owner shall, by April 15th of the year following the calendar year during which the SF₆ was added, provide documentation to the Department demonstrating compliance with 310 CMR 7.72(4)(a) and (b) and describing any additional actions taken or anticipated actions that are expected to reduce the emission rate in the future.

1. GIS owners shall use data recorded pursuant to 310 CMR 7.72(8)(b) to determine whether the 1.0% maximum annual leak rate is met.

2. For the purpose of determining whether GIS meets the 1.0% maximum annual leak rate, GIS owners shall determine an annual average by dividing the amount of SF₆ added to a piece of active GIS equipment by the number of years since the previous addition of SF₆.

3. For the purpose of determining whether GIS meets the 1.0% maximum annual leak rate, GIS owners may disregard the first time SF₆ is added after the GIS becomes active GIS equipment.

4. GIS owners may apply the requirements of 310 CMR 7.72(4)(c) to any group of commonly owned, leased, operated, or controlled pieces of active GIS equipment located in Massachusetts, instead of a single piece of active GIS equipment.

(d) Upon removal of any GIS containing SF₆ from the ownership, lease, operation, or control of a GIS owner, the GIS owner shall provide for the secure storage, re-use, recycling, or destruction of the SF₆.

(e) GIS owners are responsible for compliance with 310 CMR 7.72(4) with respect to any GIS that is under their ownership, lease, operation, or control in Massachusetts.

Documentation provided to GIS owners by qualified persons, such as manufacturers, suppliers, and maintenance contractors, is sufficient to demonstrate compliance with all provisions of 310 CMR 7.72(4).

(5) Limits to Annual SF₆ Emissions.

(a) Rate Limit. For each calendar year specified below, each federal reporting GIS owner shall ensure that the annual SF₆ emission rate for all of its active GIS equipment, as calculated pursuant to 310 CMR 7.72(6)(b)8., shall not exceed the following:

Maximum Annual SF ₆ Emission Rate	
Calendar Year	Maximum Allowable SF ₆ Emission Rate
2015	3.5%
2016	3.0%
2017	2.5%
2018	2.0%
2019	1.5%

2020, and each calendar year thereafter	1.0%
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(b) Mass Limit.

1. For each calendar year specified below, each federal reporting GIS owner shall ensure that the annual SF₆ emissions from all of its active GIS equipment, as calculated pursuant to 310 CMR 7.72(6)(b)6., shall not exceed the following:

Maximum Annual SF ₆ Emissions - National Grid	
Calendar Year	Maximum Allowable SF ₆ Emissions (lbs.)
2018	2,644
2019	2,082
2020	1,457

Maximum Annual SF ₆ Emissions - Eversource	
Calendar Year	Maximum Allowable SF ₆ Emissions (lbs.)
2018	3,115
2019	2,800
2020	2,460

2. The mass emissions limits listed in 310 CMR 7.72(5)(b) are designed such that aggregate annual SF₆ emissions from all active GIS equipment owned or operated by all federal reporting GIS owners subject to 310 CMR 7.72(5), as calculated pursuant to 310 CMR 7.72(6)(b)6., shall not exceed the following:

Maximum Annual SF ₆ Emissions - Aggregate	
Calendar Year	Maximum Allowable SF ₆ Emissions (lbs.)
2018	5,759
2019	4,882
2020	3,917

(6) Annual Reporting Requirements.

(a) By April 15th, 2016 and each year thereafter, each federal reporting GIS owner must submit an annual report to the Department for emissions that occurred during the previous calendar year.

(b) The annual report shall be submitted electronically in a format specified by the Department, and must contain all of the following information:

1. The federal reporting GIS owner's name, physical address, and mailing address;
2. The location of records and documents;
3. The name and contact information including e-mail address and telephone number of the responsible official submitting the report, and the person primarily responsible for preparing the report;
4. The year for which the information is submitted;
5. The authorized signature of a responsible official of the federal reporting GIS owner, and the following certification statement: "I certify that I have personally examined the report for this facility and am familiar with the information contained in that report and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware

that there are significant penalties for submitting false information, including possible fines and imprisonment."

6. The number of pounds of SF₆ emitted from GIS equipment owned, leased, operated, or controlled by the federal reporting GIS owner and located in Massachusetts during the year, as calculated using the equation specified in 40 CFR § 98.303 and procedures for estimating missing data specified in 40 CFR § 98.305, adjusted to account for any emergency events reported pursuant to 310 CMR 7.72(7);
7. The total nameplate capacity of SF₆-containing active GIS equipment owned, leased, operated, or controlled by the federal reporting GIS owner and located in Massachusetts at the end of the year, as calculated in a manner consistent with the data reporting requirement specified in 40 CFR § 98.306(a)(1);
8. The annual SF₆ emission rate for active GIS equipment owned, leased, operated, or controlled by the federal reporting GIS owner and located in Massachusetts, as calculated by dividing the number of pounds of SF₆ emitted during the year by the nameplate capacity of SF₆-containing active GIS equipment at the end of the year, as calculated pursuant to 310 CMR 7.72(6)(b)6. and 7.;
9. All other related information submitted to US EPA in accordance with 40 CFR § 98.306, except for any information that the Department obtains directly from US EPA; and
10. Any information required to comply with 310 CMR 7.72(7)(b).

(7) Emergency Event Exemption.

(a) If a federal reporting GIS owner wishes to exempt a particular release of SF₆ emissions from its annual calculation of the emissions limit (rate or mass), the federal reporting GIS owner must meet its burden of proof to demonstrate, and the Department must determine, that such release of SF₆ was:

1. Caused by a sudden, unforeseeable emergency event, including, but not limited to: fire, flood, earthquake, or act of vandalism; and could not have been prevented by the exercise of prudence, diligence, and care; and was beyond the control of the federal reporting GIS owner; or
2. Necessary to avoid an immediate electrical system outage.

(b) In order for the Department to determine that an emergency event exemption is warranted, a federal reporting GIS owner must submit the following information in its annual report:

1. A detailed, chronological, narrative description of the sudden, unforeseeable, emergency event or of the specific circumstances necessitating a release of SF₆ in order to avoid an electrical system outage. Such description shall include, but is not limited to, the following:
 - a. The nature of the event (e.g., fire, flood, earthquake);
 - b. The date and time the event occurred;
 - c. The location of the event;
 - d. The equipment that was affected by the event;
 - e. The function of the affected equipment within the facility's system;
 - f. The amount of SF₆ released (in pounds);
 - g. The specific event which resulted in the release of SF₆; and
 - h. The precautions taken to prevent the reported release of SF₆.
2. Information and documentation (including, but not limited to, witness statements, photographs, analysis of damaged equipment, accident reconstruction, or other evidence) that can demonstrate by a preponderance of evidence the requirements for exemption set forth in 310 CMR 7.72(7)(a); and
3. Any other information specified in the Department's annual reporting form.

(c) If the Department determines that the federal reporting GIS owner has failed to demonstrate that the event meets the criteria provided at 310 CMR 7.72(7)(a), the Department will notify the federal reporting GIS owner, and the federal reporting GIS owner shall amend the relevant annual emission report to include SF₆ emissions resulting from the event.

(8) Monitoring, Q/A, and Recordkeeping Requirements.

(a) All federal reporting GIS owners shall comply with all requirements of 40 CFR § 98.304 and 307 with respect to equipment and containers used in Massachusetts.

(b) All GIS owners shall record, no less than annually, the amount of SF₆ added, if any, to each piece of active GIS equipment that was placed under their ownership, lease, operation, or control on or after January 1, 2015.

(c) All GIS owners shall retain for five years documentation sufficient to demonstrate compliance with 310 CMR 7.72 and shall provide such documentation to the Department on request. The documentation shall be submitted in a format and within the time limit requested by the Department.

(9) Compliance Verification and Enforcement.

(a) If a federal reporting GIS owner exceeds the applicable Maximum Annual SF₆ Emissions limits set forth in 310 CMR 7.72 (5)(b)1.: *Table*, any such excess emissions shall be deemed a release into the environment without the authorization or approval of the Department and shall be presumed to constitute a significant impact to public health, welfare, safety, and the environment. A federal reporting GIS owner shall be deemed to be in non-compliance only if such owner exceeds the applicable individual limit provided in 310 CMR 7.72 (5)(b)1.

(b) The Department shall enforce the requirements of 310 CMR 7.72 in accordance with applicable federal and Massachusetts law, including but not limited to M.G.L. c. 21A, sec.16 and 310 CMR 5.00; M.G.L. c. 111, sec. 2C; M.G.L. c. 111 secs. 142 A through 142M; and M.G.L. c. 21N sec. 7(d).

(c) Compliance Verification. The Department may verify compliance with 310 CMR 7.72 by conducting inspections, requesting information and records and requiring the collection of information not previously required; provided that this section does not limit the authority of the Department as otherwise provided by law or in an authorization, determination, modification, permit, or other approval, or by the terms of any order or other enforcement document.

1. Access to Information. Where necessary to ascertain compliance with 310 CMR 7.72 including actual or potential SF₆ emissions, the Department may request of a GIS Owner information or records. The GIS Owner shall, within 10 business days of the request, furnish the requested information or records and shall permit Department personnel or authorized representatives to have access to and to take images of such records.

2. Requirement to Collect Information. When the Department has reason to believe that a GIS Owner has exceeded its SF₆ emissions limit or violated any other condition in 310 CMR 7.72, the Department may require a GIS Owner to submit the necessary information or records to determine compliance. In doing so, the Department may require a GIS Owner to:

- a. Perform audits on SF₆ emissions records using standard procedures and methods;
- b. Quantify SF₆ emissions in accordance with the procedures, and methods as the Department may prescribe;
- c. Make periodic reports to the Department, as necessary, to assure continuous compliance with 310 CMR 7.72; and

- d. Maintain other records and provide any other information as the Department might reasonably require.